

U. S. GEOLOGICAL SURVEY
ANNUAL PEAK FLOW FREQUENCY ANALYSIS
Following Bulletin 17-B Guidelines
Program peakfq
(Version 4.0, December, 2000)

Station - 04074850 LILY RIVER NEAR LILY, WI
2002 DEC 5 16:25:51

I N P U T D A T A S U M M A R Y

Number of peaks in record	=	30
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	30
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.183
Standard error of generalized skew	=	0.550
Skew option	=	WEIGHTED
Gage base discharge	=	0.0
User supplied high outlier threshold	=	--
User supplied low outlier criterion	=	--
Plotting position parameter	=	0.00

***** NOTICE -- Preliminary machine computations. *****
***** User responsible for assessment and interpretation. *****

WCF134I-NO SYSTEMATIC PEAKS WERE BELOW GAGE BASE.	0.0
WCF195I-NO LOW OUTLIERS WERE DETECTED BELOW CRITERION.	19.1
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.	327.3

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ANNUAL FREQUENCY CURVE PARAMETERS -- LOG-PEARSON TYPE III

	FLOOD BASE		LOGARITHMIC		
	EXCEEDANCE DISCHARGE	PROBABILITY	MEAN	STANDARD DEVIATION	SKEW
SYSTEMATIC RECORD	0.0	1.0000	1.8976	0.2409	-0.321
BULL.17B ESTIMATE	0.0	1.0000	1.8976	0.2409	-0.268

ANNUAL FREQUENCY CURVE -- DISCHARGES AT SELECTED EXCEEDANCE PROBABILITIES

ANNUAL EXCEEDANCE PROBABILITY	BULL.17B ESTIMATE	SYSTEMATIC RECORD	'EXPECTED PROBABILITY'	95-PCT CONFIDENCE LIMITS FOR BULL. 17B ESTIMATES	
			ESTIMATE	LOWER	UPPER
0.9950	16.5	16.0	14.1	10.3	22.6
0.9900	19.5	19.1	17.3	12.7	26.1
0.9500	30.5	30.2	28.9	22.1	38.3
0.9000	38.3	38.2	37.0	29.1	46.8
0.8000	50.0	50.1	49.2	40.0	59.7
0.5000	81.0	81.4	81.0	68.3	96.2
0.2000	126.7	126.8	128.4	106.0	158.6
0.1000	158.0	157.3	162.0	129.6	206.1
0.0400	197.8	195.7	206.7	158.1	270.8
0.0200	227.6	223.8	241.6	178.6	321.7
0.0100	257.2	251.5	277.9	198.4	374.2
0.0050	286.8	278.9	315.8	217.8	428.4
0.0020	326.0	314.7	368.9	242.9	502.8
0.6667	63.5	(1.50-year flood)			
0.4292	89.4	(2.33-year flood)			

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I N P U T D A T A L I S T I N G

WATER YEAR	DISCHARGE	CODES	WATER YEAR	DISCHARGE	CODES
1970	40.0		1986	43.0	
1971	81.0		1987	73.0	
1972	121.0		1988	46.0	
1973	142.0		1989	55.0	
1974	114.0		1990	140.0	
1975	158.0		1991	102.0	
1976	112.0		1992	53.0	
1978	30.0		1993	62.0	
1979	50.0		1994	173.0	
1980	36.0		1995	78.0	
1981	50.0		1996	167.0	
1982	26.0		1997	152.0	
1983	134.0		1998	101.0	
1984	48.0		1999	89.0	
1985	130.0		2000	112.0	

Explanation of peak discharge qualification codes

PEAKFQ	WATSTORE	
CODE	CODE	DEFINITION
D	3	Dam failure, non-recurrent flow anomaly
G	8	Discharge greater than stated value
X	3+8	Both of the above
L	4	Discharge less than stated value
K	6 OR C	Known effect of regulation or urbanization
H	7	Historic peak

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EMPIRICAL FREQUENCY CURVES -- WEIBULL PLOTTING POSITIONS

WATER YEAR	RANKED DISCHARGE	SYSTEMATIC RECORD	BULL.17B ESTIMATE
1994	173.0	0.0323	0.0323
1996	167.0	0.0645	0.0645
1975	158.0	0.0968	0.0968
1997	152.0	0.1290	0.1290
1973	142.0	0.1613	0.1613
1990	140.0	0.1935	0.1935
1983	134.0	0.2258	0.2258
1985	130.0	0.2581	0.2581
1972	121.0	0.2903	0.2903
1974	114.0	0.3226	0.3226
1976	112.0	0.3548	0.3548
2000	112.0	0.3871	0.3871
1991	102.0	0.4194	0.4194
1998	101.0	0.4516	0.4516
1999	89.0	0.4839	0.4839
1971	81.0	0.5161	0.5161
1995	78.0	0.5484	0.5484
1987	73.0	0.5806	0.5806
1993	62.0	0.6129	0.6129
1989	55.0	0.6452	0.6452
1992	53.0	0.6774	0.6774
1979	50.0	0.7097	0.7097
1981	50.0	0.7419	0.7419
1984	48.0	0.7742	0.7742
1988	46.0	0.8065	0.8065
1986	43.0	0.8387	0.8387
1970	40.0	0.8710	0.8710
1980	36.0	0.9032	0.9032
1978	30.0	0.9355	0.9355
1982	26.0	0.9677	0.9677

